NHTSA-2008-0019

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January 18, 2008

Ms. Nicole Nason, Administrator
National Highway Traffic Safety Administration
1200 New Jersey Avenue, SE
Washington, D.C., 20509-0001

Dear Ms. Nason,

Subject: Petition for Reconsideration – FMVSS 108 Lamps, Reflective Devices, and Associated Equipment (Docket No. NHTSA-2007-28322)

Reference: March 30, 2006 Alliance comments to FMVSS 108 Lamps, Reflective Devices, and Associated Equipment, NPRM published December 30, 2005 (Docket No. NHTSA-2005-22093 and NHTSA-2006-23634)

Ford Motor Company (Ford), a domestic manufacturer and importer of motor vehicles with offices at The American Road, Dearborn, Michigan 48121-1899 hereby petitions for reconsideration of the Final Rule concerning the reorganization of FMVSS 108 Lamps, Reflective Devices, and Associated Equipment published in the December 4, 2007 Federal Register.

Ford participated in the development of the Alliance of Automobile Manufacturers (Alliance) Petition for Reconsideration, and fully incorporates that petition by reference. Please find additional Ford comments below:

SAE Standard Requirements Incorporated by Reference in FMVSS 108

NHTSA has stated during the FMVSS 108 Reorganization rulemaking and in various prior interpretations that all requirements of SAE standards referenced in Tables I and III are incorporated in FMVSS 108. However the record shows that NHTSA has historically incorporated SAE requirements only selectively.

The following examples demonstrate that not all requirements of referenced SAE standards are/were intended by NHTSA to be incorporated into FMVSS 108.

From the Denial of petition for rulemaking from SAE (March 29, 1996, 61 FR 14044):

> "Additionally, because NHTSA reference to SAE standards is not always absolute, in that parts of standards are referenced or exceptions are made to specific requirements in SAE standards where different or more stringent performance is necessary for safety purposes, the value of the latest version of an SAE document is lessened. Thus, without a careful reading of FMVSS No. 108, a reader of the newest J594 could continue to be misled as to the pertinent requirements, just as with the currently referenced version."

From the NPRM proposing to incorporate by reference SAE J588 NOV84 (Docket 88-17; Not. 1, September 9, 1988, 53 FR 35097):

> "An additional difference between the new SAE turn signal specifications and the ones specified in Standard No. 108 concerns intensity. If a turn signal lamp is closer than 4 inches (100 mm) to a low beam headlamp, it must have 2½ times the intensity otherwise required. The SAE would apply the factor of 2½ only if the turn signal were closer to the low beam headlamp than 60 mm. The agency does not believe that this modification is in the interest of safety and proposes to retain the current requirement."

From the Final Rule incorporating by reference SAE J588 NOV84 (Docket 88-17; Not. 2, May 15, 1990, 55 FR 20158):

> "C. The Turn Signal-Headlamp Intensity Multiplier
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> An additional difference between the new SAE turn signal specifications and the ones currently contained in Standard No. 108 concerns intensity. If a turn signal lamp is closer than 4 inches (100 mm) to a lower beam headlamp, it must have 2.5 times the intensity otherwise required. The SAE applies the factor of 2.5 only if the turn signal is closer than 60 mm to the lower beam headlamp. NHTSA proposed retention of the current requirement. The SAE specification applies the photometric multiplier in three steps, from 60 mm to 100 mm. VW stated that the failur e of NHTSA to adopt the SAE requirement was design restrictive and not in the interests of harmonization. Ford also supported the graduated turn signal intensity multiplier, as did Hella. Peterson, Grote, and TSEI supported retention of the existing requirement.
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> Ford based its argument on SAE Information Report 1221 DEC84 Headlamp-Turn Signal Spacing which documents the change in the SAE specifications. NHTSA notes that the research in the Report was performed in 1977, which was before higher intensity headlamps which comply with SAE J579c were in common use. As these headlamps are now in almost universal use in the United States, NHTSA regards the earlier research as not truly relevant today. Given the advent and usage of higher intensity headlamps, there appears to be an even greater need than before to preserve the intensity ratio. NHTSA has done so by retaining the existing requirement."

Listed below are specific instances where the Agency has incorporated referenced SAE standard requirements in a manner that creates new FMVSS 108 requirements.

1) Turn Signal Photometric Multipliers

Ford requests deletion of paragraphs S7.1.1.10.2, S7.1.1.10.3, S7.1.1.10.4 (b), S7.1.1.10.4 (c) and S7.1.1.10.4 (d) to meet the Agency's stated intent not to impose any new substantive requirements on manufacturers.

FMVSS 108 Final Rule text regarding turn signal photometric multipliers:

> S7.1.1.10.4 Spacing based photometric multipliers.
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> (a) where the spacing measurement of S7.1.1.10.2 or S7.1.1.10.3 between a turn signal lamp and the lighted edge of any lower beam headlamp is less than 100 mm the photometric multiplier must be 2.5.
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> (b) where the spacing measurement of S7.1.1.10.2 or S7.1.1.10.3 between a turn signal lamp and the lighted edge of any lamp such as an auxiliary lower beam headlamp or fog lamp used to supplement the lower beam headlamp is at least 75 mm but less than 100 mm the photometric multiplier of Table VI must be 1.5.
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> (c) where the spacing measurement of S7.1.1.10.2 or S7.1.1.10.3 between a turn signal lamp and the lighted edge of any lamp such as an auxiliary lower beam headlamp or fog lamp used to supplement the lower beam headlamp is at least 60 mm but less than 75 mm the photometric multiplier must be 2.0.
>
> (d) where the spacing measurement of S7.1.1.10.2 or S7.1.1.10.3 between a turn signal lamp and the lighted edge of any lamp such as an auxiliary lower beam headlamp or fog lamp used to supplement the lower beam headlamp is less than 60 mm the photometric multiplier must be 2.5.

The Alliance raised a concern regarding 1.5 times and 2.0 times front turn signals in their response to the NPRM in which it was stated "...there is no basis for the existence of 2X or 1.5X Front Turn Signals in the Current 108. Current 108 S5.3.1.7 states "On a motor vehicle on which the front turn signal lamp is less than 100 mm from the lighted edge of a lower beam headlamp, as measured from the optical center of the turn signal lamp, the multiplier applied to obtain the required minimum luminous intensities shall be 2.5." There is no allowance for 2X or 1.5X Front Turn Signals. The agency has not identified, nor does the Alliance know of any data that supports the safety need for 2X or 1.5X front turn signals. If the agency has such data, the Alliance requests that it be placed in the docket for examination and evaluation."

NHTSA responded to the Alliance concern in the Preamble discussion on page 68243 which reads:

> "Another example is illustrated in the comments by AAM and Koito about the spatial relationship between front turn signal lamps and certain other front mounted lamps and the photometric requirements the relationship imposes on the front turn signal lamp as stated in paragraph S7.1.1.2 of the NPRM (S7.1.1.10 of the final rule). Current FMVSS No. 108, at paragraph S5.3.1.7, imposes a multiplier of 2.5 on minimum photometric intensity requirements for a front turn signal lamp mounted less than 100 mm from the lighted edge of a lower beam headlamp. Turn signal lamps are also required to be designed to conform to referenced standards SAE J588 NOV84 for vehicles less than 2032 mm in overall width and SAE J1395 APR85 for vehicles 2032 mm or more in overall width. These documents provide, in paragraph 5.1.5.4 of SAE J588 and

> paragraphs 5.1.5.4, 5.1.5.5, and 5.1.5.6 of SAE J1395, additional photometric requirements for turn signal lamps based upon their construction. The method the turn signal lamp uses to project light (i.e., whether it primarily uses a reflector to direct light or not) determines how the relationship is measured between the turn signal lamp and the lower beam headlamp, or a surrogate lower beam headlamp such as an auxiliary lower beam headlamp or a fog lamp. Based upon this measurement, the turn signal lamp may be required to have a multiplier of 1.5, 2.0, or 2.5 times the minimum photometric intensity. Thus, it is possible for a turn signal lamp not to be required to have increased intensity based upon paragraph S5.3.1.7 of current FMVSS No. 108 but still be required to have increased intensity because of its construction or proximity to another front lamp, such as a fog lamp. This is an example where an incorporated SAE document imposes requirements beyond those explicitly stated in the regulatory text of Standard No. 108."

As documented above, the preamble discussion in Docket 88-17; Not. 2, May 15, 1990, 55 FR 20158 supports the Alliance position that not all requirements of referenced SAE standards are/were intended by NHTSA to be incorporated into FMVSS 108.
Please note that Ford supported the graduated turn signal intensity multiplier specified by SAE J588 NOV84, however the Agency retained the existing requirement of 2.5 times the intensity.

The above cited rulemaking history clearly demonstrates that graduated luminous intensity multipliers for front turn signals specified by SAE J588 NOV84 were not incorporated in FMVSS 108. The December 4, 2007 Final Rule application of the graduated luminous intensity multipliers to any lamp such as an auxiliary lower beam headlamp or fog lamp is therefore an inappropriate incorporation of an SAE referenced requirement. FMVSS 108 has never specified requirements relative to an auxiliary lower beam headlamp or fog lamp and constitutes new substantive requirements.

2) Rear License Plate Holder

Ford requests deletion of paragraph S6.6.3 to meet the Agency's stated intent not to impose any new substantive requirements on manufacturers.

The final rule states:

> "S6.6.3 License plate holder. Each rear license plate holder must be designed and constructed to provide a substantial plane surface on which to mount the plate. The plane of the license plate mounting surface and the plane on which the vehicle stands must be perpendicular within +/- 15°."

Current FMVSS 108 text:

> "S5.1.1 Except as provided in succeeding paragraphs of this S5.1.1, each vehicle shall be equipped with at least the number of lamps, reflective devices, and associated equipment specified in Tables I and III and S7, as applicable. Required equipment shall be designed to conform to the SAE Standards or Recommended Practices referenced in those tables. Table I applies to multipurpose passenger vehicles, trucks, trailers, and buses, 80 or more inches in overall width. Table III applies to passenger cars and motorcycles and to multipurpose passenger vehicles, trucks, trailers, and buses, less than 80 inches in overall width."

A rear license plate holder is not a lamp, reflective device or associated equipment and is not separately listed as an Item in Table I or III.

SAE J587 October 1981, the SAE standard referenced in Tables I and III for license plate lamp performance and test procedure requirements, lists license plate holder specifications only in the context of a test fixture for measuring the photometric performance of a license plate lamp. A license plate lamp is unique from all other lamps required by FMVSS 108 because it provides illumination toward the license plate, while all other required lamps are designed to provide illumination outward from the vehicle and not onto a part of the vehicle or equipment attached to it. Because a license plate lamp does not project light away from the vehicle it cannot be tested with the photometric test procedure specified for all other required lamps. The situation is similar to reflex reflectors which have a unique photometric test procedure.

If the location and orientation of the license plate relative to the license plate lamp was not specified by the test procedure there would be no objective means of measuring the photometric performance of a license plate lamp. The license plate holder described in SAE J587 is a test fixture just as the "rectangular test plate of clean, white blotting paper" specified to be 1.5mm (1/16 in.) from the face of the license plate holder. SAE J587 also specifies that the license plate lamp for vehicles other than motorcycles illuminate a 150 X 300 mm (6 X 12 in) test plate; however there are no Federal regulations that specify license plate size or even the installation of a license plate.

Ford is aware of the April 24, 1995, interpretation the agency provided Volkswagen indicating that FMVSS 108 Tables I and III have incorporated SAE J587 in its entirety. We believe this position does not accurately represent the Agency's publicly stated intent relative to referenced SAE standards as noted above.

3) Indicators

Ford requests deletion of paragraphs S6.6.2 and S9.8 to meet the Agency's stated intent not to impose any new substantive requirements on manufacturers.

Current Tables I and III reference a total of 16 SAE standards which require a total of 3 indicators (High Beam, Turn Signal and Hazard Warning Signal). However, current FMVSS 108 paragraphs S5.5.2 and S5.5.6 require High Beam and Turn Signal indicators respectively. The presence of specific requirements in FMVSS 108 for two of the three indicators referenced in SAE standards indicates that not all of the requirements of the referenced SAE standards were intended to be incorporated in FMVSS 108. Including the hazard warning signal pilot indicator in S6.6.2 and in S9.8 of the December 4, 2007 Final Rule constitutes a new requirement, which was not part of any previous version of FMVSS 108.

Please contact my office at (313) 845-4320 if you have questions or need additional information relative to Ford's comments.

Sincerely,

James P. Vondale